Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

LIGHT SURGERY

Esotera 28:107-110, Feb 77

/Article by Scott Hill, biophysicist and parapsychologist, Copenhagen/

Alma-Ata, the capital of the Kazakh SSR, was the scene of an unusual conference in October 1976. Its theme was frontier areas of science. Only three guests from the West were invited. One of them was Esotera staffer Scott Hill (cf. picture). In the second part of his report on the research results of Soviet experts in the frontier areas of biology, agriculture and medicine, he describes their surprising advances in therapy involving laser techniques.

/Text/ According to the definition of the Polish investigator Czerski, a living organism is "a self-regulating system, equipped with many interlocking and inter-dependent mechanisms. Absorption of radiant energy creates a disturbance within the system which results in the activation of these mechanisms."

If we consider the known theories as to how radio waves and microwaves and other electromagnetic frequencies are absorbed by tissues, it is apparent that the effect of the wave should be proportional to its thermic (heat) content. For example, we know that a strong microwave or a radar beam can cause tissues "to cook" within a very short time, even internally. This is the principle underlying the microwave oven, a household appliance that is gradually coming on the market. Based on this model of the relationship between the effect of a wave and its thermal content, it was estimated that membranes of nerve cells cannot be stimulated at a field intensity below the temperature of frequencies above 100 megacycles. Various experiments (e.g. Bawins and Adey's studies on the effect of waves of an intensity of only 1 mW per sq cm /1 milliwatt = one one-thousandth of a watt/ on the brain of cats) have nevertheless yielded results which prompted the pure thermal

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

hypothesis to be abandoned. The entire literature concerning electromagnetic effects on biosystems is actually full of unexplained manifestations.

Surgery with Laser Beams

Although work with microwaves and higher frequencies has been going on for some time, experience with the effect of special light is just being acquired.

In ophthalmological surgery, the fact that laser beams of high intensity can be used to destroy certain cells in a precisely delineated area is already being utilized. If the beam is strong enough, a cell or part of an organ of which the absorption corresponds to the laser can be vaporized without so much as warming the surrounding cells. This procedure is used in treatment of retinal diseases, to "bore" tiny holes in tissue and to carry out similar surgical procedures. With the use of microscopic lens systems, the light beam can be very concentrated and its diameter can be kept extremely small. However, this is the extent to which laser beams have been used to date for medical research and therapy, at least in the West.

The effect described is again thermal. However, this does not mean that quite different effects could not be achieved with much weaker laser light. This idea was enthusiastically taken up by investigators in the Soviet province of Kazachstan as early as 1965. However, to date noneof their work has ever appeared in English.

In October 1976, the author had the opportunity to participate in an extraordinary conference in Alma Ata, the capital of the Kazakh SSR, to which only two other guests from the West were permitted to come. One of the principal topics from the frontier areas of biology, agriculture and medicine that were on the agenda and about which Soviet specialists provided detailed reports, was the use of laser techniques in medical therapy. The first surprise was the amazingly high level of knowledge of the Russian investigators concerning the effect of electromagnetic fields on the basic processes of life and reciprocal relationships between life and light (cf. Part 1 of this report "Healing with Light," Esotera p 13 ff, 1/77).

Unusual effects have also been reported occasionally with strong laser beams. In 1965, a Western investigator reported on a case of skin cancer (melanoma) where growth was checked to some extent by laser light. The report was filed but it was not pursued any further.

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

Skin grafts "took" better if the destroyed or injured tissue was irradiated with laser light. However, this did not appear to be related to the incineration or vaporization of the tissue.

Plants Grow Better and More Rapidly

Soviet scientists decided to investigate the effect of weak laser light on tissues and plants.

At present, lasers can be manufactured to give off every color of the spectrum, even invisible infrared (IR) and ultraviolet (UV). The Soviet scientists discovered very quickly that the growth of plants can be promoted by laser light. The plants not only grew more rapidly, but they also were larger and bore more fruit (yield increment up to 30%). The experimental results were recorded on film (time-lapse photography).

These experiments could of course be highly significant for a country that has to import grain. Agricultural testing stations discovered that the germination period of seed grain could be reduced by exposing it to red laser light produced by a gas laser supplied with a mixture of helium and neon gas. Power was so slight (around 30 mW) that there was no rise in temperature.

Amazing effects were also observed in the field of medicine. Large open wounds (purulent abscesses) that had been refractory to skin grafts or other conventional therapy healed "magically." Even if only half of the wound was "lasered," the entire wound healed.

This technique was clinically tested in USSR hospitals and it is now in general use.

It would be expected that superficial wounds would be the easiest to treat. However, pathological conditions involving internal organs surprisingly present just as good a response.

In some cases the reflex areas used in physiotherapy were selected as the site of laser irradiation. In other cases, lasers were directed to acupuncture points or special "motor points." The list of diseases that can be treated with laser light is growing daily.

Paralysis Heals in Laser Light

Facial paralysis, a condition for which there is otherwise scarcely any therapy also responds to laser treatment. But

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

how much radiation is correct, how frequently and where? The Russian scientists decided to use acupuncture points to find an answer.

First, comparisons were made of the voltage conditions of the facial acupuncture points on the left and right halves of the face in paralyzed children. In the process, a "biological semiconduction effect" was ascertained and a disturbance in the balance between the "yin" and "yang" of several acupunture meridians. This disturbed balance was corrected by the use of the laser. Voltage differences in the halves of the face were measured before and after every session. Major disturbances required longer and more intensive treatment. Therapy was completed when the electrical voltage conditions were successfully balanced and a large number of the children were found to be without paralysis!

The idea of using laser beams for medicine was not taken up only in the Soviet Union. Similar studies were reported from West Germany, Canada, Hungary and the Scandinavian countries. However, the technique is still in its infancy. Russian investigators should nevertheless receive recognition for the fact that they took the initiative in this new and exciting area of science.

In West Germany, Messerschmidt-Boelkow-Blohm has gone into the laser acupuncture market. However, it is strange that the German manufacturers of these apparatus did not appear to have any knowledge of the advances made in this area in the Soviet Union. As in the rediscovery of the wheel, they worked quite independently, developing their own apparatus for the localization of acupuncture points and treatment with weak laser light (2 mW). In 1975 the Cybernetics Division of Messerschmidt marketed the "Akuplas" for the steep price of DM 5000. At that time, it was not precisely known at the plant whether or not the device would work. Except for the studies by the German-Canadian Friedrich Plog (cf. Esotera p 1131, 12/75), who never described his investigation results in detailed form, there was no medical experience available in this area.

In the meantime, according to our information, many German physicians and practitioners have at least tested the Akuplaser in practice. It is hoped that an extensive study on the results of the therapy will be available in the near future.

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4

Picture captions:

P 108: The Congress building in Alma-Ata, the capital of the Kazakh SSR (part of the Biophysical Research Institute of the University of Kazakhstan), meeting place of Russian frontier scientists.

P 109: The author (in the middle, with beard) with Dr J. Dobrowski, Warsaw (far left), the Congress director Prof Inyushin (left) and Dr Wilhelm Schelderup, Oslo, in the Biophysical Institute of the University of Alma-Ata. In the foreground, Soviet laser LG-75 (24 milliwatts, helium and neon).

P 110: Prof Inyushin, director of the conference at Alma-Ata, at 35, the youngest biology professor in the Soviet Union.

7072
CSO:8120

Approved For Release 2000/08/07 : CIA-RDP96-00787R000500030002-4